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New data on Linyphiidae spiders (Aranei) in the Maritime Province of Russia

Новые данные о пауках (Aranei) семейства Linyphiidae в Приморском крае России

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KEY WORDS: Araneae, Far East Asia, Primorsky Krai, new record, new species, redescription
КЛЮЧЕВЫЕ СЛОВА: Araneae, Приморье, новая находка, новый вид, переописание, Дальний Восток.

ABSTRACT. A survey of Linyphiidae in the Maritime Province revealed 28 species. Of them, one species is new for Russia, one for the Russian Far East, and nine for the Maritime Province. One species, *Stemonyphantes mikhailovi* sp.n. is described as a new to science. Nine poorly known species are illustrated. General appearance of 8 species is illustrated for the first time. Records of four species in the Maritime Province are the southernmost for their ranges.

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РЕЗЮМЕ. В результате изучения коллекции линифиид, собранных в Приморском крае было обнаружено 28 видов. Из них один вид является новым для России, один для Дальнего Востока России и девять для Приморского края. Один вид, *Stemonyphantes mikhailovi* sp.n. описан как новый для науки. Девять плохо известных видов проиллюстрированы. Впервые проиллюстрирован внешний вид для 8 видов. Находки четырех видов в Приморском крае являются самыми южными для их ареалов.

Introduction

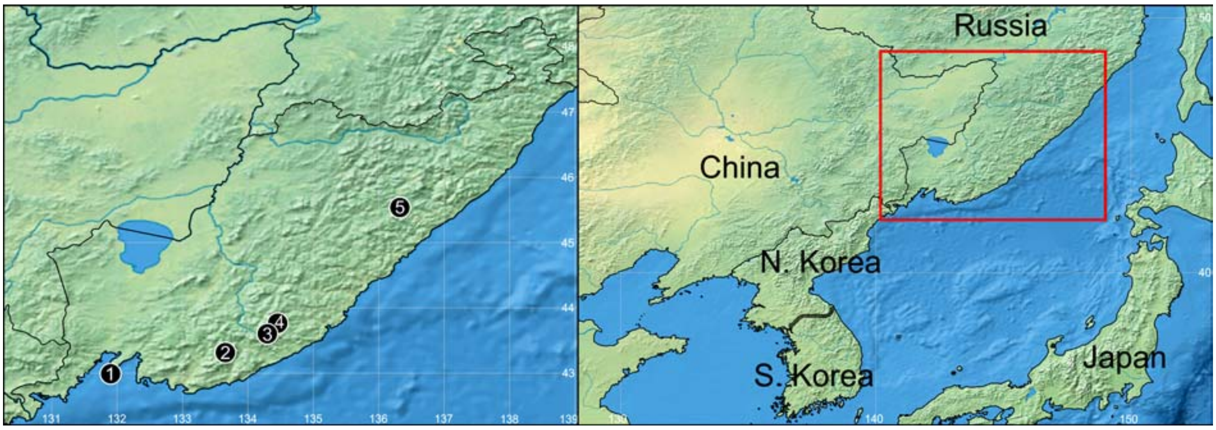
According to the number of spider species (888) known from the south part of the Russian Far East [Mikhailov, 2021] the region holds 6th position among all ecoregions of the former Soviet Union. The south part of the Russian Far East refers to the region ‘T1’ in Mikhailov [2021]. This region covers the entire Maritime Province (Primorsky Krai), southern part of Khabarovsk Province, the Jewish Autonomous Oblast’ and most of the Amur Region. So far, 303 species of linyphiids are known in this region [Mikhailov, 2021; Marusik *et al*., unpubl. data]. This territory has been studied unevenly. The most detailed studies were conducted in two reserves, Bolshekhekhtsyrsky and Bureinsky, both in the Khabarovsk Province. In the Maritime Province, only 125 species (42%) of linyphiids are known although it is the richest in respect of the number of spider families.

The northern part of the Maritime Province remains less studied due to its remoteness and lack of roads. Most of the species discussed in this paper have been collected in 2011 in the Ozernoye Plateau, located in the Krasnoarmeisky District in the north of the province. In addition, a few species of linyphiids were collected in the south part, namely on the Snezhnaya, Oblachnaya, Olkhovaya mountains, and one species in the city of Vladivostok.

The goals of this paper are: 1) to report linyphiid species found in the province for the first time, 2) to provide new data about species distribution within the province, 3) to provide diagnostic figures for poorly known species and 4) to describe one new species.

Material and methods

Spiders were collected in five localities in the Maritime Province of Russia (Map 1), mainly by the first author:



Map 1. Collecting localities of linyphiids in Maritime Province. 1 — Russkii Island, Vladivostok; 2 — Olkhovaya Mt.; 3 — Oblachnaya Mt.; 4 — Snezhnaya Mt.; 5 — Ozernoye Plateau.

Карта 1. Места сборов линифиид в Приморском крае. 1 — остров Русский, Владивосток; 2 — гора Ольховая; 3 — гора Облачная; 4 — гора Снежная; 5 — плато Озёрное.

1. KR — Krasnoarmeiskii District, Ozernoye Plateau, 45°50'N, 136°37'E, 17–25.06.2011.
2. OL — Ol'ginskii District, Snezhnaya Mt., 43°44'N, 134°25'E, 9–10.07. 2019.
3. LA — Lazovskii District, Oblachnaya Mt., 43°41'N, 134°11'E, 14–18.08.2008.
4. PA — Partizanskii District, Olkhovaya Mt., 43°20'N, 133°39'E, 7.07.2019.
5. VL — Vladivostok, Russkii Island, 43°0'N, 131°53'E, 1.10.2020.

Material was collected mainly by pitfall trapping and some specimens by hand picking.

Specimens were photographed by means of a Nikon DS-Ri2 camera attached to a Nikon SMZ25 stereomicroscope in the Far Eastern Federal University (Vladivostok) and by an Olympus Camedia E-520 camera attached to an Olympus SZX16 d at the Zoological Museum of the University of Turku, Finland. Photographs were taken in dishes with soft white paper at the bottom, filled with alcohol. Digital images were montaged by using Zerene Stacker software (http://zerenesystems.com/cms/stacker). All the examined material from the Maritime Province will be deposited in the Far Eastern Federal University (FEFU) and Zoological Museum of the the Moscow State University (ZMMU).

Species found the first time in the Maritime Province are marked by asterisk (*), species new to the southern part of the Russian Far East is indicated by two asterisks (**), and species new to Russia is marked by three asterisks (***). References under each species are provided for the most relevant identification sources. A biogeographic term "Palaearchaearctic" refers to the southeastern Palearctic.

Abbreviations used in the text and figure plates. Copulatory organs: *Arp* — anterior radical process, *Ct* — cymbium outgrowth, *E* — embolus, *Ep* — proximal part of the embolic division, *P* — paracymbium, *R* — radix, *S* — seta, *Ta* (1, 2) — tegular apophyses, *Te* — tegulum. Collectors: MMO — M.M. Omelko, AAF — A.A. Fomichev.

Species survey

Agyneta olivacea (Emerton, 1882)

A. olivacea: Hippa, Oksala, 1985: 281, f. 1B, E; 2E–F; 3A, F (♂♀).
A. olivacea: Dupérré, 2013: 20, f. 72–78 (♂♀).

MATERIAL EXAMINED: 23 ♂♂ 25 ♀♀ (FEFU), KR, pitfall traps in mixed forest, MMO.

DISTRIBUTION. Circumholarctic boreo-nemoral range. In the Maritime Province the species was previously known only by one record in the Dal'negorskiy District.

Allomengea dentisetis (Grube, 1861)

A. dentisetis: van Helsdingen, 1974: 311, f. 17–23 (♂♀).
A. dentisetis Ono *et al*., 2009: 335, f. 1152–1156 (♂♀).

MATERIAL EXAMINED: 3 ♂♀ (FEFU), LA, pitfall traps on mountain slope, MMO.

DISTRIBUTION. East Palaearctic – Trans-Nearctic boreo-montane range. In the Maritime Province the species was previously known from the Kedrovaya Pad' and Lazo Reserves as well as Gornotaezhnoe Village.

Anguliphantes ussuricus (Tanasevitch, 1988)
Figs 1, 9–12.

Lepthyphantes ussuricus Tanasevitch, 1988: 189, f. 16–20 (♂♀).

MATERIAL EXAMINED: 8 ♂♀ (FEFU), KR, pitfall traps in mixed forest and under *Pinus pumila*, MMO.

DISTRIBUTION. Manchurian range. In the Maritime Province the species was previously known from the Ussuri Reserve and Chernyshevka Village (Anuchinsky District).

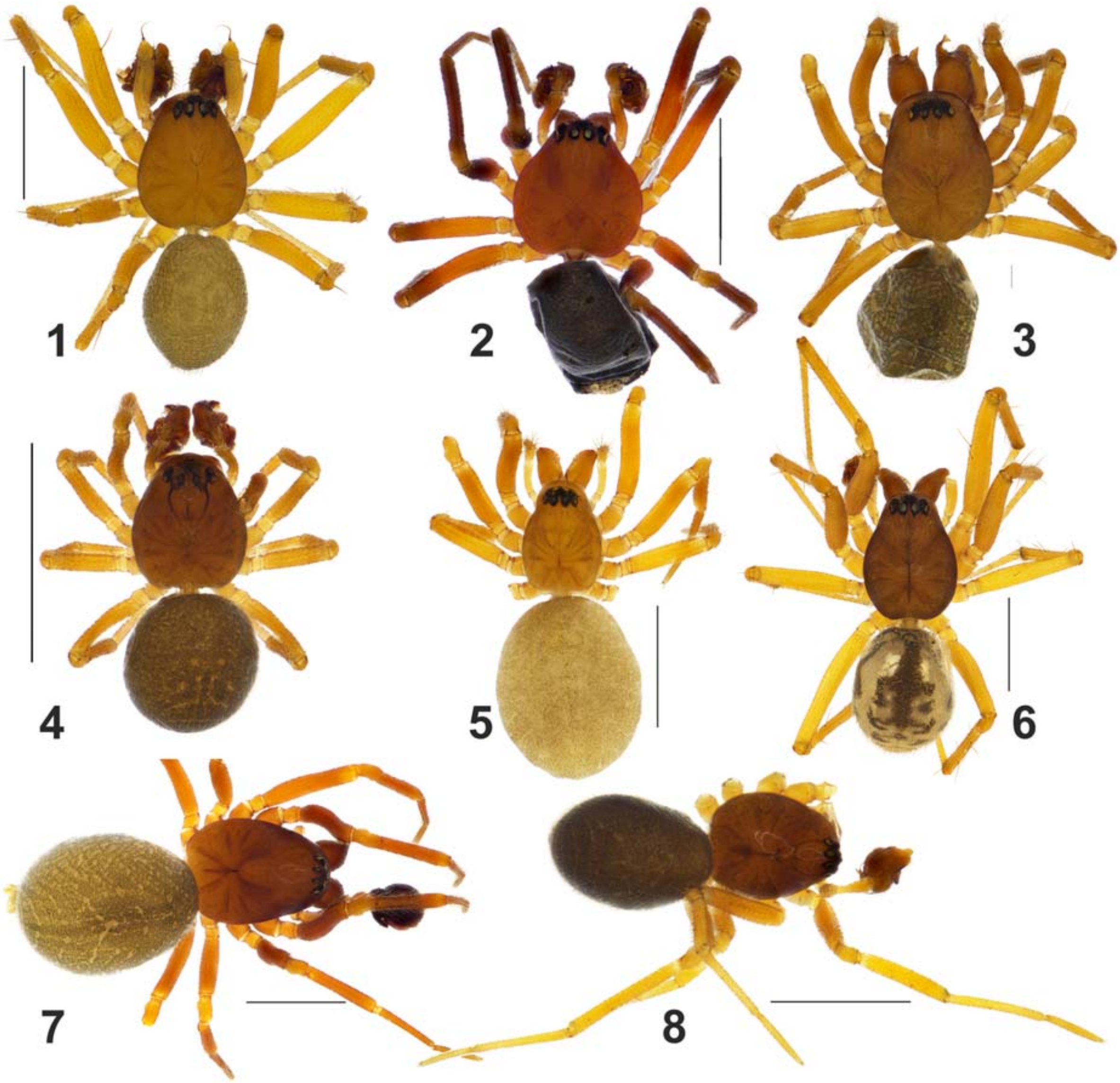
NOTES. Copulatory organs of the species have been illustrated only in one paper. Therefore we provide images of the male palp along with its general appearance, which have not been shown before.

Asperthorax borealis Ono et Saito, 2001
Figs 2, 13–15.

A. borealis: Ono *et al*., 2009: 274, f. 183–188 (♂♀).
A. borealis: Marusik *et al*., 2010: 285, f. 1–2 (♀).

MATERIAL EXAMINED: 1 ♂ (FEFU), KR, mixed forest, MMO.

DISTRIBUTION. Far East Asia: Maritime Province, Kamchatka, and Hokkaido. In the Maritime Province the species was previously known only by one record from Chernyshevka Village (Anuchinsky District).



Figs 1–8. General appearance of *Anguliphantes ussuricus* (1), *Asperthorax borealis* (2), *Asthenargoides kurenstchikovi* (3), *Glyphesis asiaticus* (4), *Centromerus amurensis* (5), *Mughiphantes taczanowskii* (6), *Tibioploides kurenstchikovi* (7) and *Dicymbium yaginumai* (8). 1–4, 6–8 — male; 5 — female. Scale = 1 mm.

Рис. 1–8. Внешний вид *Anguliphantes ussuricus* (1), *Asperthorax borealis* (2), *Asthenargoides kurenstchikovi* (3), *Glyphesis asiaticus* (4), *Centromerus amurensis* (5), *Mughiphantes taczanowskii* (6), *Tibioploides kurenstchikovi* (7) и *Dicymbium yaginumai* (8). 1–4, 6–8 — самец; 5 — самка. Масштаб: 1 мм.

NOTES. Since male of *A. borealis* have been depicted only once (same images in two publications) and its general appearance has not been depicted before, we provide these images here.

Asthenargoides kurenstchikovi Eskov, 1993
Figs 3, 16–19.

A. kurenstchikovi Eskov, 1993: 47, f. 17–22 (♂♀).

MATERIAL EXAMINED: 2 ♂♂ (FEFU), KR, pitfall traps in mixed forest, MMO.

DISTRIBUTION. Manchurian range. Known only from the Far East Russia (Amur Region, Khabarovsk and Maritime Provinces). In Maritime Province, the species was previously known only by one record from the Kedrovaya Pad' Reserve.

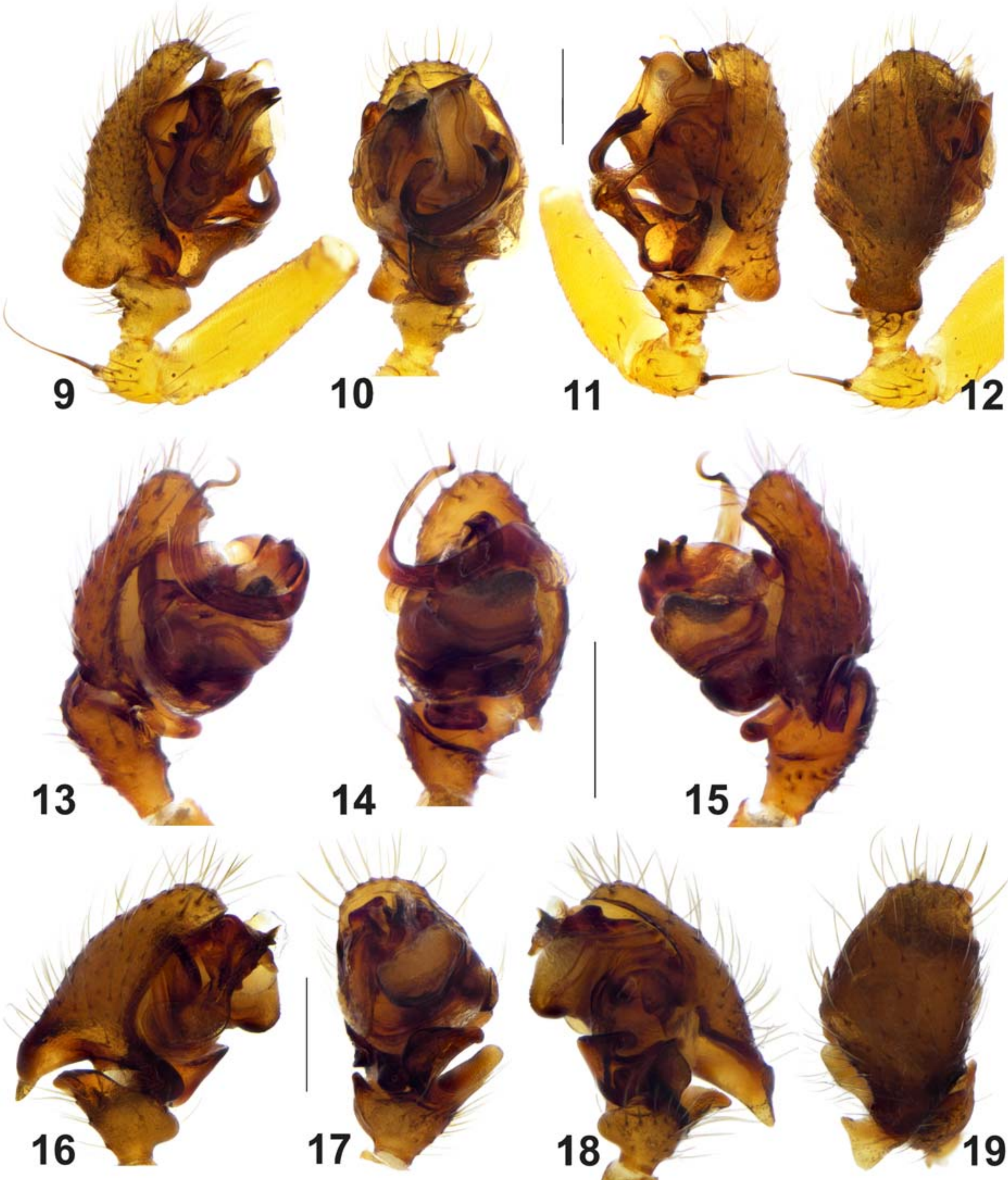
NOTES. Copulatory organs of the species have only been depicted in the original description; therefore, we provide images of male palp along with its general appearance, which have not been shown before.

Bathylinyphia maior (Kulczyński, 1885)

B. maior: Marusik *et al*., 2001: 84, f. 5–17 (♂♀).

B. major: Ono *et al*., 2009: 337, f. 1169–1173 (♂♀).

MATERIAL EXAMINED: 4 ♂♂ (FEFU), KR, pitfall traps in mixed forest, pine forest and alpine tundra, MMO.



Figs 9–19. Male palp of *Anguliphantes ussuricus* (9–12), *Asperthorax borealis* (13–15) and *Asthenargoides kurenstchikovi* (16–19). 9, 13, 16 — prolateral; 10, 14, 17 — ventral; 11, 15, 18 — retrolateral; 12, 19 — dorsal. Scale = 0.2 mm.

Рис. 9–19. Пальпа самца *Anguliphantes ussuricus* (9–12), *Asperthorax borealis* (13–15) и *Asthenargoides kurenstchikovi* (16–19). 9, 13, 16 — пролатерально; 10, 14, 17 — вентрально; 11, 15, 18 — ретролатерально; 12, 19 — дорзально. Масштаб: 0,2 мм.

DISTRIBUTION. Siberian-Palaearchaearctic range: from West Siberia to Kamchatka and south to Honshu and South Korea. In the Maritime Province this species was previously known from a few localities (Kedrovaya Pad' Reserve, Chuguevka Field Station and Anisimovka Village).

Bathyphantes eumenis (L. Koch, 1879)

B. simillimus: Paquin, Dupérré, 2003: 136, f. 1488–1491 (♂♀).
B. eumenis: Marusik, 2015: 676, f. 14F, J (♂♀).
MATERIAL EXAMINED: 3 ♂♂ (FEFU), KR, pitfall traps in mixed forest, MMO.

DISTRIBUTION. Circum-Holarctic range. In the Maritime Province, this species was previously known from several localities (Kedrovaya Pad' and Lazo Reserves, Chernyshevka Village and Verkhneussuriyskiy Field Station.

Centromerus amurensis Eskov et Marusik, 1992
Figs 5, 20.

C. amurensis Eskov et Marusik, 1992: 35, f. 1a–c (♂♀).

MATERIAL EXAMINED: 1 ♀ (FEFU), KR, pitfall traps under *Pinus pumila*, MMO.

DISTRIBUTION. Manchurian range (Amur Region, Khabarovsk and Maritime Provinces). In Maritime Province the species was previously known from a couple of localities (Lesogorsk and Lazo Reserve).

NOTES. Despite being treated in several publications, the copulatory organs of the species have been depicted only once. Therefore we provide images of epigyne along with female's general appearance, which have not been shown before.

Ceratinella scabrosa (O. Pickard-Cambridge, 1871)**

C. scabrosa: Millidge, 1977: 19, f. 101 (♂).

C. scabrosa: Roberts, 1987: 26, f. 2c (♂♀).

MATERIAL EXAMINED: 8 ♂♂ (FEFU), KR, pitfall traps in mixed forest, MMO.

DISTRIBUTION. Palaearctic range.

NOTES. This is the first record of this species in the Russian Far East. The species was previously known from Europe to South Siberia. *Ceratinella rosea* Oliger, 1985, known from the Maritime Province, is possibly a synonym of *C. scabrosa* [Marusik, 2009].

Cnephalocotes obscurus (Blackwall, 1834)*

C. obscurus Roberts, 1987: 67, f. 27g, 28b (♂♀).

C. obscurus Paquin, Dupérré, 2003: 96, f. 887–890 (♂♀).

MATERIAL EXAMINED: 1 ♂ (FEFU), KR, pitfall traps in mixed forest, MMO.

DISTRIBUTION. Circumholarctic boreo-nemoral range.

NOTES. This is the first record of this species in the Maritime Province.

Concavocephalus rubens Eskov, 1989*

C. rubens Eskov, 1989a: 69, f. 1.1–7 (♂♀).

C. rubens: Marusik, Tanasevitch, 2003: 161, f. 5–8, 12–15 (♂♀).

MATERIAL EXAMINED: 1 ♂ (FEFU), KR, pitfall traps in mixed forest, MMO.

DISTRIBUTION. Siberian-Palaearchaearctic range.

NOTES. This is the first record of this species in the Maritime Province and the southernmost in its range.

Dicymbium yaginumai Eskov et Marusik, 1994
Figs 8, 21–24.

D. yaginumai Eskov et Marusik, 1994: 44, f. 1–5 (♂♀).

D. yaginumai: Ono *et al*., 2009: 274, f. 201–203 (♂♀).

MATERIAL EXAMINED: 1 ♂ (FEFU), KR, pitfall traps in mixed forest, MMO.; 1 ♂ (FEFU), OL, foot of Snezhnaya Mt., mixed forest, AAF.

DISTRIBUTION. NE Palaearchaearctic range. In the Maritime Province the species was previously known from several localities (Ussuri Reserve, Okeanskaya railroad station, Chernyshevka Village, Pravaya Sokolovka River and Lazo Reserve).

NOTES. Copulatory organs of the species have only been depicted in two publications. Therefore, we provide images of the male palp along with its general appearance, which have not been shown before.

Epibellowia septentrionalis (Oi, 1960)*

E. septentrionalis: Ono *et al*., 2009: 330, f. 1087–1080 (♂♀).

MATERIAL EXAMINED: 2 ♂♂ (FEFU), KR, pitfall traps in mixed forest, MMO.

DISTRIBUTION. NE Palaearchaearctic range: it is known from the southern part of the Russian Far East, Sakhalin, South Kuril Islands, Hokkaido and Honshu.

NOTES. This is the first record of this species in the Maritime Province.

Eskovina clava (Zhu et Wen, 1980)

Oinia trilineata Eskov, 1984: 1341, pl. 2, f. 1–5 (♂♀).

MATERIAL EXAMINED: 1 ♂ (FEFU), OL, foot of Snaznaya Mt., mixed forest (A.A. Fomichev).

DISTRIBUTION. Manchurian range: known in the southern part of the Russian Far East, China (eastern Inner Mongolia and Jilin), and Korea. In the Maritime Province the species was previously known from several localities (Okeanskaya, Kedrovaya Pad' Reserve, Sikhote-Alinskiy Reserve, Dal'negorsk, Putyatin Is., Turiy Rog Village, Lazo Reserve, Vladivostok and Barabash).

Glyphesis asiaticus Eskov, 1989
Figs 4, 25–27.

G. asiaticus Eskov, 1989b: 97, f. 1–4 (♂♀).

MATERIAL EXAMINED: 3 ♂♂ (FEFU), KR, pitfall traps at moist meadow, MMO.

DISTRIBUTION. Siberian-Manchurian range. In the Maritime Province the species was previously known only by one record at the Pravaya Sokolovka River (Chuguyevsky District).

NOTES. This species has been treated in several publications, however, its copulatory organs have been depicted only in the original description. Therefore, we provide images of the male palp along with male's general appearance, which have not been shown (except carapace) before.

Gnathonarium dentatum (Wider, 1834)

G. dentatum: Tanasevitch, 2013: 173, f. 7–12, 22–27, 38–94 (♂♀).

MATERIAL EXAMINED: 2 ♂♂ (FEFU), VL, parapet of the FEFU embankment, MMO; 3 ♂♂ (FEFU), KR, pitfall traps and net sweeping in mixed forest, MMO.

DISTRIBUTION. Transpalaearctic nemoral range. In the Maritime Province, it was previously reported from a number of localities (Lazo Reserve, Ussuri Reserve, Bikin River. middle flow, Vladivostok, Turiy Rog Village, Dal'negorsk, Gornotayozhnoe Village).

Improphantes biconicus (Tanasevitch, 1992)*
Figs 28–30.

Lepthyphantes biconicus Tanasevitch, 1992: 48, f. 5f–i (♂).

I. biconicus: Ono *et al*., 2009: 330, f. 1069–1071 (♂).



Figs 20–27. Epigyne of *Centromerus amurensis* (20), palp of *Dicymbium yaginumai* (21–24) and *Glyphesis asiaticus* (25–27). 20, 23, 26 — ventral; 21, 25 — prolateral; 22, 27 — retrolateral. Scale = 0.2 mm.

Рис. 20–27. Эпигина *Centromerus amurensis* (20), пальпа *Dicymbium yaginumai* (21–24) и *Glyphesis asiaticus* (25–27). 20, 23, 26 — вентрально; 21, 25 — пролатерально; 22, 27 — ретролатерально. Масштаб: 0,2 мм.

MATERIAL EXAMINED: 1 ♂ (FEFU), KR, pitfall traps in mixed forest, MMO.

DISTRIBUTION. Palaearchaearctic range: south of the Russian Far East and Hokkaido (Japan).

NOTES. This is the first record of this species in the Maritime Province. Copulatory organs of the species have only been depicted in a couple of publications. Therefore, we provide images of male palp. Female of this species remains unknown.

Mughiphantes taczanowskii (O. Pickard-Cambridge, 1873)* Figs 6, 31–34.

Lepthyphantes torvus Kulczyński, 1926: 58, pl. 2, f. 20–21 (♀).

Lepthyphantes trucidans: Holm, 1973: 95, f. 78–84 (♂).

MATERIAL EXAMINED: 11 ♂♂ (FEFU), KR, Ozernoe Plateau, pitfall traps in mixed forest, MMO.

DISTRIBUTION. Siberian boreal range.

NOTES. This is the first record of this species in the Maritime Province and it is the southernmost in its range. Since male palp of *M. taczanowskii* have been depicted only once and its general appearance has not been depicted before we provide these figures here.

Neriene radiata (Walckenaer, 1841)

Neriene radiata: van Helsdingen, 1969: 223, f. 315–324 (♂♀).

MATERIAL EXAMINED: 1 ♂ (FEFU), KR, road between plateau and Molodezhnoe Vill., MMO.

DISTRIBUTION. Circum-Holarctic nemoral range. In Maritime Province, this species was previously recorded from several localities (Ussuri Reserve, Sikhote-Alin'skiy Reserve, Bikin River middle flow, Dalnegorsk, Cheremshanaya, Lazo Reserve).

Sisicottus montanus (Emerton, 1882)***

S. montanus: Miller, 1999: 579, f. 4, 12, 14, 47–48, 53–54, 59–65 (♂♀).

S. montanus: Paquin, Dupérré, 2003: 119, f. 1238–1242 (♂♀).

MATERIAL EXAMINED: 1 ♂ (FEFU), KR, pitfall traps in mixed forest, MMO.

DISTRIBUTION. This species was known to be distributed across the Nearctic: from Alaska to the Newfoundland [Miller, 1999]. It is the first record of the species in the Palaearctic and of this genus in the continental Eurasia.

NOTES. The new record lies more than 5000 kilometres from the nearest known locality in Alaska [Miller, 1999]. So far, only one species of the genus, *S. panopeus* Miller, 1999, was known in the Palaearctic from the northern Kuril Islands.

Stemonyphantes mikhailovi **sp.n.** Figs 39–40, 44–46.

TYPE: Holotype ♂ (ZMMU), RUSSIA, ***Maritime Prov***., Krasnoarmeiskii Dist., Ozernoye Plateau, ca. 45°50′N, 136°37′E, light trap, 17–25.06.2011 (M.M. Omelko).

ETYMOLOGY. The species is named in honour of our friend and colleague, arachnologist K.G. Mikhailov (Moscow State University) on the occasion of his 60th birthday.

DIAGNOSIS. New species is related to both *S. griseus* (Schenkel, 1936) and *S. sibiricus* (Grube, 1861). Males of *Stemonyphantes mikhailovi* sp.n. can be easily differentiated from those of *S. griseus* by the size and shape of the tegular apophyses (in retrolateral view): *Ta1* is 1.5 times smaller than *Ta2* in the new species (*vs*. *Ta1* 4 times smaller than *Ta2*); *Ta2* in new species is comparatively narrow, hook-liked *vs*. wide and blunt (cf. Figs 46 and 49). Moreover, males of the new species have unmodified tibiae I (*vs*. swollen, covered with strong setae in *S. griseus*, cf. Figs 40 and 43). From *S. sibiricus* male of the new species can be recognized by the shape of the proximal part of the embolic division (*Ep*): in *S. mikhailovi* sp.n. this part is short, very slightly curved (see Fig. 45) *vs*. long, significantly curved (see figs 2–3 in Tanasevitch [2006]).

DESCRIPTION. Total length 5.69. Carapace 2.42 long, 1.95 wide. Eye sizes and interdistances: AME: 0.11, ALE: 0.16, PME: 0.14, PLE: 0.15, AME–AME: 0.09, PME–PME: 0.13. Carapace pale yellow with black longitudinal band, black spots at cephalic area and black edges. Chelicerae, sternum and mouth parts dark brown. Legs yellowish brown with distinct annulations. Abdomen dorsally black with complex pattern consisting of round white and irregular yellowish and brown spots. Lateral sides of abdomen brown with yellowish and black (posteriorly) spots. Ventrally abdomen brown with black median part.

Leg's measurements. I 14.94 (3.97, 0.86, 4, 4.34, 1.77); II 13.17 (3.49, 0.86, 3.51, 3.75, 1.56); III 8.66 (2.49, 0.69, 2.1, 2.44, 0.94); IV 11.49 (3.17, 0.79, 3, 3.36, 1.17). Chaetotaxy: femur I with one dorsal and one prolateral spine; femora of all other leg with 1 dorsal spine. Patellae of all legs without spines. Tibiae I with one prolateral and 2 pairs of ventral spines; tibia II with 1 prolateral, 1 retrolateral and 5 ventral spines; tibia III with 2 dorsal, 1 prolateral and 3 pairs of ventral spines; tibia IV with 1 dorsal, 2 prolateral, 1 retrolateral and 5 ventral spines.

Palp as in Figs 44–46. Tibia with strong seta (*S*) prolaterally. Cymbium with outgrowth. Paracymbium C-shaped. Tegulum (*Te*) with 2 apophysises (*Ta* 1 and *Ta* 2); *Ta* 1 short, pointed; *Ta* 2 large, hook-like. Embolic division with large, flattened radical part (*R*, radix). Radix anteriorly subdivided into two branches (*Arp*). Embolus (*E*) long, wide with its tip hidden by branches of radix.

Tenuiphantes alacris (Blackwall, 1853)*

Lepthyphantes alacris: Roberts, 1987: 148, f. 77d (♂♀).

MATERIAL EXAMINED: 1 ♂ (FEFU), KR, inside tent set on the edge of moist meadow, MMO.

DISTRIBUTION. Transpalaearctic boreo-nemoral range.

NOTES. This is the first record of this species in the Maritime Province.

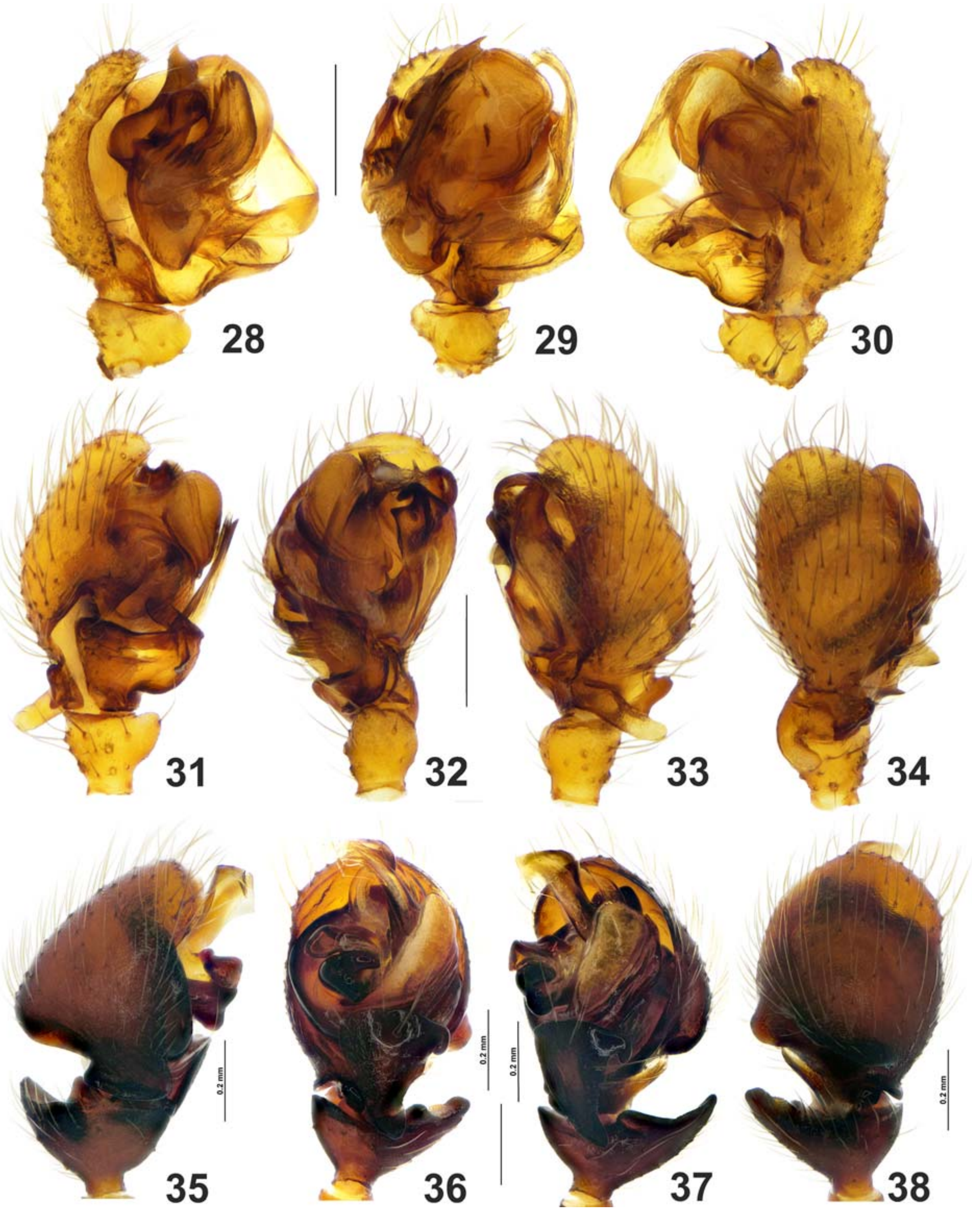
Tibioploides kurenstchikovi Eskov et Marusik, 1991* Figs 7, 35–38.

T. kurenstchikovi Eskov et Marusik, 1991: 241, f. 19–21, 26–27 (♂♀).

MATERIAL EXAMINED: 2 ♂♂ (FEFU), KR, pitfall traps in mixed forest, MMO.

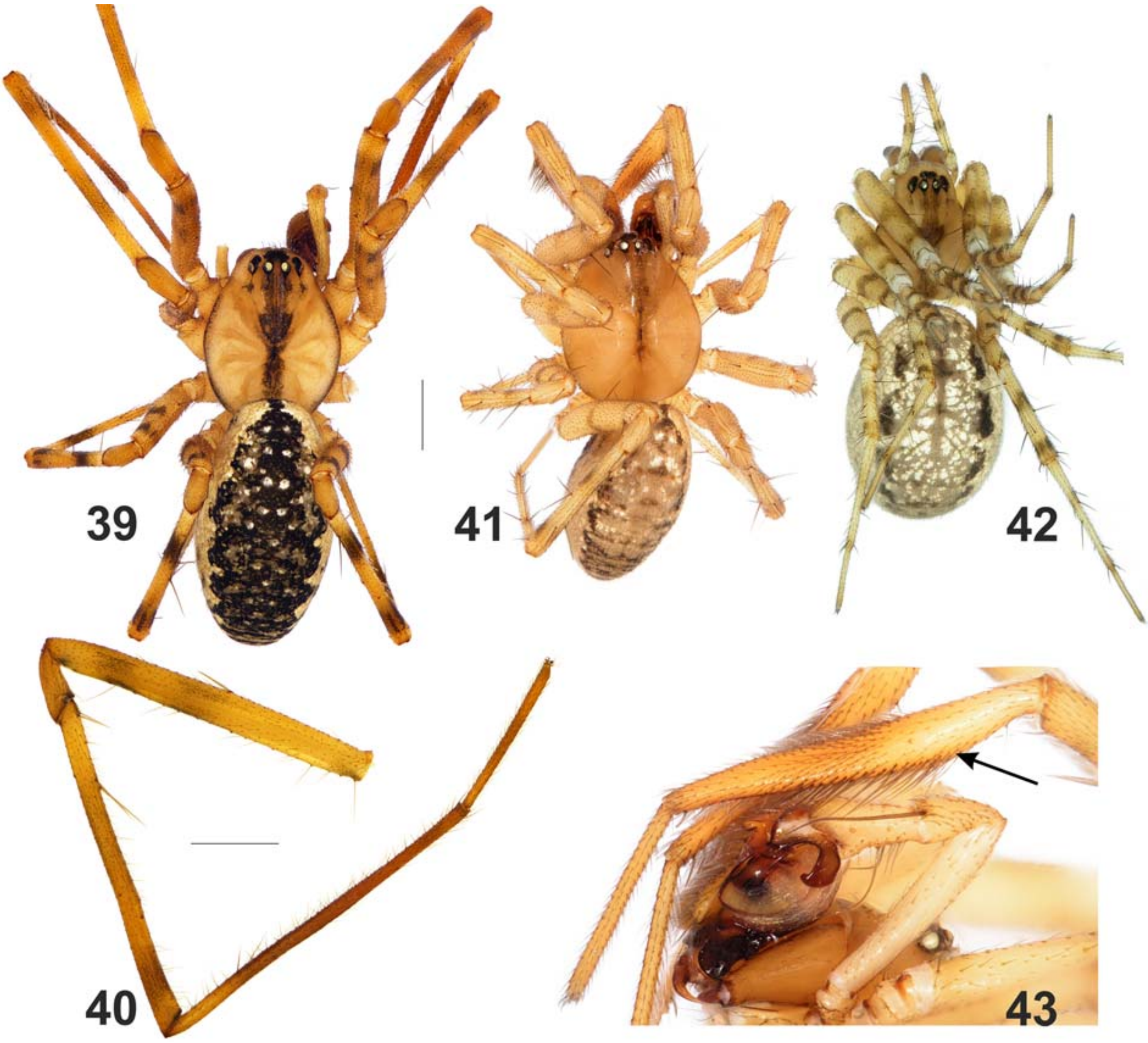
DISTRIBUTION. Amurian range.

NOTES. It is the first record of the species from the Maritime Province and the southernmost in its range. Since the male palp of *T. kurenstchikovi* have been depicted only once and its general appearance has not been depicted before we provide these images here.



Figs 28–38. Male palp of *Improphantes biconicus* (28–30), *Mughiphantes taczanowskii* (31–34) and *Tibioploides kurenstchikovi* (35–38). 28, 31, 35 — prolateral; 29, 32, 36 — ventral; 30, 33, 37 — retrolateral; 34, 38 — dorsal. Scale = 0.2 mm.

Рис. 28–38. Пальпа *Improphantes biconicus* (28–30), *Mughiphantes taczanowskii* (31–34) и *Tibioploides kurenstchikovi* (35–38). 28, 31, 35 — пролатерально; 29, 32, 36 — вентрально; 30, 33, 37 — ретролатерально; 34, 38 — дорзально. Масштаб: 0,2 мм.



Figs 39–43. *Stemonyphantes mikhailovi* sp.n. (39–40, holotype) and *S. griseus* (41–43, from Xinjiang). 39, 41 — general appearance of male; 42 — general appearance of female; 40, 43 — male's leg I. Scale 1 mm.

Рис. 39–43. *Stemonyphantes mikhailovi* sp.n. (39–40, голотип) и *S. griseus* (41–43, из Синьцзяна). 39, 41 — внешний вид самца; 42 — внешний вид самки; 40, 43 — нога I самца. Масштаб 1 мм.

Walckenaeria cuspidata Blackwall, 1833*

W. cuspidata: Roberts, 1987: 28, f. 5d, 8i (♂♀).

MATERIAL EXAMINED: 1 ♂ (FEFU), KR, pitfall traps in mixed forest, MMO.

DISTRIBUTION. Circum-Holarctic boreo-nemoral range.

NOTES. It is the first record of the species in the Maritime Province.

Walckenaeria golovatchi Eskov et Marusik, 1994

W. golovatchi Eskov et Marusik, 1994: 62, f. 100–105 (♂♀).
W. golovatchi: Ono *et al*., 2009: 286, f. 378–383 (♂♀).

MATERIAL EXAMINED: 1 ♂ (FEFU), KR, pitfall traps in mixed forest, MMO.

DISTRIBUTION. Palaearchaearctic range: the species is known from Cisamuria (Priamurye), Maritime Province, Sakhalin Island, south Kuril Islands, Hokkaido, and Honshu.

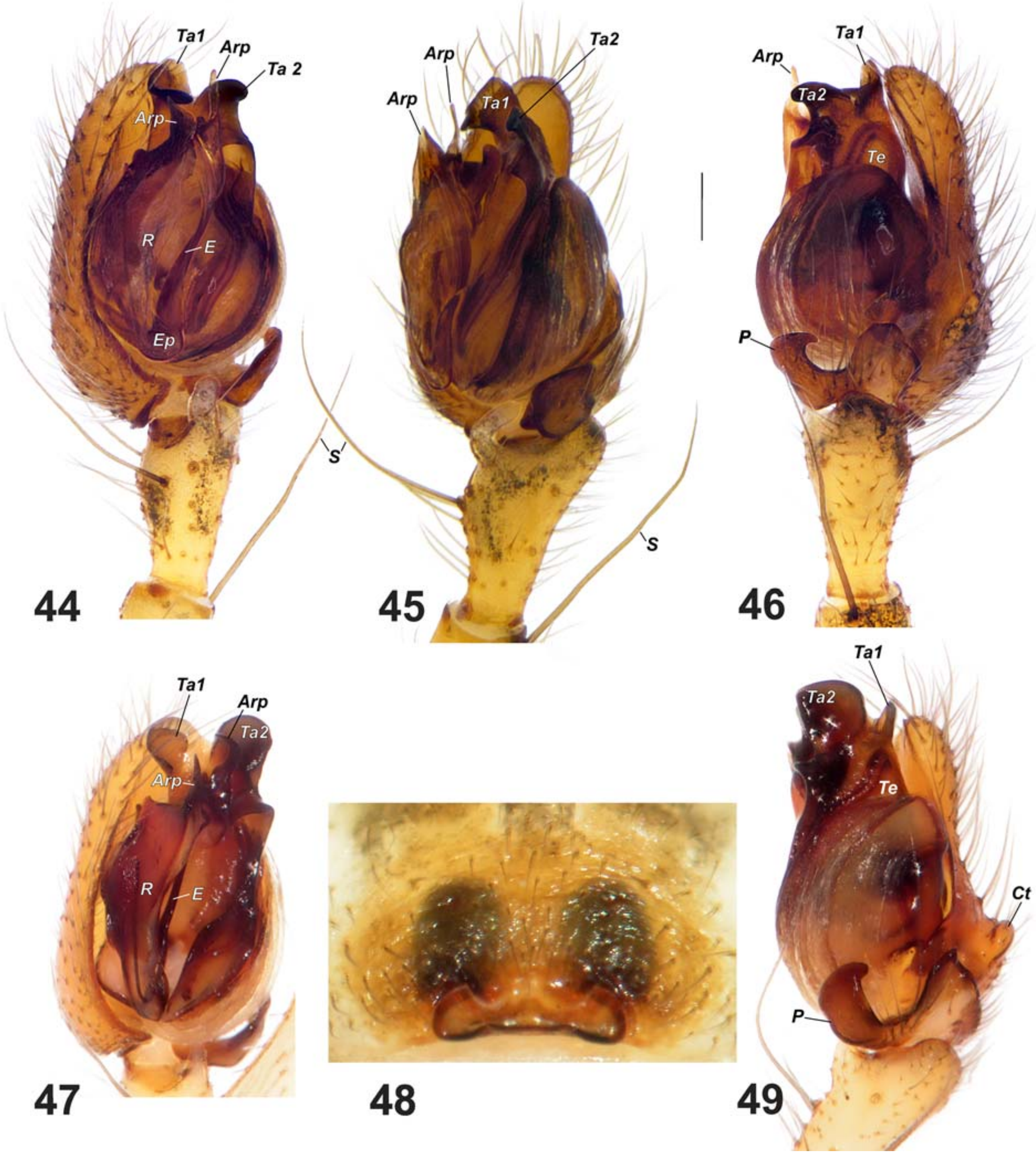
In the Maritime Province the species was previously known only by one record in Chernyshevka Village.

Walckenaeria karpinskii (O. Pickard-Cambridge, 1873)

W. holmi Millidge, 1983: 190, f. 260, 262, 265, 277–278, 280, 282 (♂♀).
W. karpinskii: Efimik, Esyunin, 1996: 70, f. 4g, 5e–f (♂♀).
W. karpinskii: Paquin, Dupérré, 2003: 126, f. 1349–1352 (♂♀).

MATERIAL EXAMINED: 9 ♂♀ (FEFU), KR, pitfall traps in mixed forest, MMO.

DISTRIBUTION. Circumholarctic arcto-boreal range. In Maritime Province the species was previously known only from a single locality: env. of Chuguevka Village.



Figs 44–49. *Stemonyphantes mikhailovi* sp.n. (44–46, holotype) and *S. griseus* (47–49, from Xinjiang). 44, 47 — palp, prolateral; 45 — palp, ventral; 46, 49 — palp, retrolateral; 48 — epigyne, ventral. Scale 0.2 mm. Abbreviations: *Arp* — anterior radical process, *Ct* — cymbium outgrouth, *E* — embolus*, P* — paracymbium, *R* — radix, *S* — seta, *Ta* (1, 2) — tegular apophysises*, Te* — tegulum.

Рис. 44–49. *Stemonyphantes mikhailovi* sp.n. (44–46, голотип) и *S. griseus* (47–49, из Синьцзяна). 44, 47 — пальпа, пролатерально; 45 — пальпа, вентрально; 46, 49 — пальпа, ретролатерально; 48 — эпигина, вентрально. Масштаб 0.2 мм. Сокращения: *Arp* — передний вырост радикса, *Ct* — вырост цимбиума, *E* — эмболюс*, Ep* — proximal part of the embolic division, *P* — парацимбиум, *R* — радикс, *S* — щетинка, *Ta* (1, 2) — тегулярные отростки*, Te* — тегулум.

Wubanoides fissus (Kulczyński, 1926)

W. fissus: Ono *et al*., 2009: 330, f. 1081–1086 (♂♀).

MATERIAL EXAMINED: 1 ♂ (FEFU), PA, hand picking, scree, AAF.

DISTRIBUTION. East Palaearctic range: whole Siberia and south to northern Honshu. In the Maritime Province, the species was previously known from two localities (Oblachnaya Mt. and Anisimovka Village).

Table 1. Number of linyphiid species in various regions of the East Palaearctic. Letters refers to the ecoregions shown on Fig. 50.

Таблица 1. Число видов линифиид в различных регионах Восточной Палеарктики. Буквы относятся к регионам, показанным на рис. 50.

region or country	number of species
Japan	290
N+O	332
R	355
S1	269
S2	144
T1	303
T2	167

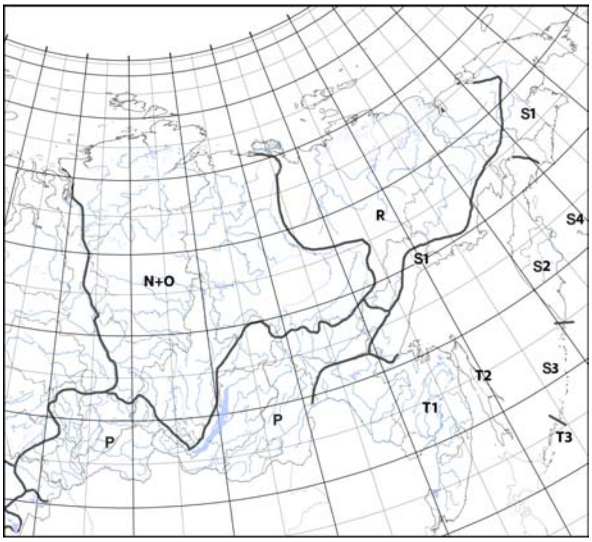


Fig. 50. Regions of Eastern Russia after Mikhailov [2021]. N+O — Middle Siberia, P — mountains of South Siberia, R — Northeastern Siberia, S1 — continental Far North-East, S2 — Kamchatka, S3 — N-Kuriles, S4 — Commander Islands, T1 — continental southern Far East, T2 — Sakhalin, T3 — S-Kuriles.

Рис. 50. Регионы выделяемые Михайловым [Mikhailov, 2021] на территории Сибири и Дальнего Востока России. N+O — Средняя Сибирь, P — горы Южной Сибири, R — Северо-восточная Сибирь, S1 — континентальный Дальний Северо-Восток, S2 — Камчатка, S3 — Северный Курилы, S4 — Командорские о-ва, T1 — континентальный южный Дальний Восток, T2 — Сахалин, T3 — Южные Курилы.

Zornella cultrigera (L. Koch, 1879)*

Z. cultrigera: Marusik *et al*., 2007: 23, f. 1–6, 13–18, 28, 34–36, 45–47, 55–57, 68–72 (♂♀).

MATERIAL EXAMINED: 2 ♂♂ 2 ♀♀ (FEFU), KR, pitfall traps in mixed forest, MMO.

DISTRIBUTION. Transpalaearctic range.

NOTES. It is the first record of this species in the Maritime Province and the southernmost in the entire range. *Zornella orientalis* Marusik, Buckle et Koponen, 2007, a species described from the Magadan Oblast and known only from there, was considered by Tanasevitch [2008] a junior synonym of *Z. cultrigera*. Specimens from the Maritime Province correspond well to *Z. cultrigera* but not to *Z. orientalis*, which we consider a separate species.

Discussion

Although the number of Linyphiidae in the south part of the Russian Far East (region T1) is rather high (303 species) in comparison to other Far Eastern territories (except for ‘R’ with 355 species, see Table 1) and even in comparison to well-studied countries, like Japan (290 species [Shinkai *et al*., 2020], it cannot be considered as well studied, and we expect finds of over hundred species both just new to the region or new to science.

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